

REMARKS

Applicants acknowledge that claims 21 and 22 are allowed and that claims 6, 14-15, and 19 were indicated to be allowable by the Examiner if rewritten to overcome the rejections under 35 U.S.C. § 112.

Applicants also gratefully acknowledge the time spent by the Examiner during the interview on October 20, 2004 during which the rejections were explained and the Applicants attorney of record explained why the process according to the present invention differed from that set forth in the cited art. Unfortunately, no agreement was reached.

Claims 1-4, 7-9, 11-13, 16-18, 20 and 23-24 were rejected as being anticipated by Soumiya et al. The present claims define a process that is neither anticipated nor rendered obvious in view of Soumiya et al.

Soumiya discloses a process that includes (1) dissolving or suspending an aluminum salt or an alumina hydrate in an aqueous zirconium oxychloride solution; (2) mixing urea or a substance capable of generating ammonia with the resulting solution or suspension; (3) hydrothermally treating the mixture of (2) by allowing it to react at a temperature of 140° to 300° C and a pressure of 4 to 150 kg/cm² (57 psi to 2134 psi) in a high-temperature and high-pressure vessel such as an autoclave to form a reaction mixture; and (4) dehydrating or drying the reaction mixture, calcining and crushing (col. 2, lines 16-27). Soumiya therefore teaches a hydrothermal process to form a reaction product. Such a process requires a high pressure and an expensive autoclave.

In contrast, the present process forms a reaction product by spray drying the aqueous solution. While Soumiya mentions spray drying, it is only in the context of drying the slurry or filter cake reaction product. In other words, Soumiya teaches that the spray drying is used **after** the reaction product (the claimed intermediate) is formed. Soumiya does not teach or suggest that spray drying could be used to form the reaction product (i.e., the claimed intermediate). In short, Soumiya does not teach or suggest that spray drying could be used **to form** the claimed intermediate.

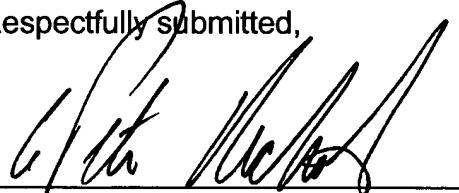
The Examiner's reference to 120° C of Example 1 is misplaced. That temperature is noted in Example 1 as a drying temperature for a reaction product that had been centrifuged, subjected to repeated dehydration and washing with water and substitution with ethanol. Moreover, the noted drying temperature of 120° relates to a drying step lasting 12 hours, which one skilled in the art would appreciate is orders of magnitude longer than spray drying (which lasts less than 1 minute). To suggest that Soumiya's reference to a temperature of 120° somehow relates to a spray drying is nothing more than impermissibly picking and choosing disparate facts from the reference to arrive at the claimed process. Soumiya does not anticipate or render obvious the present claims.

Claims 1-4, 7 and 9, were also rejected as being anticipated by Hamling. The present claims define a process that is neither anticipated nor rendered obvious in view of Hamling. Hamling teaches contacting a compound of a metal with a carbohydrate to obtain an intimate mixture and thereafter igniting the mixture. Although Hamling notes

that with respect to one embodiment, a mixture of a soluble carbohydrate with an aqueous metal solution, spray drying followed by ignition could be used, there are no examples illustrating such a process nor are there any details describing the spray drying. In fact, in the examples illustrating the use of a soluble carbohydrate, the solution was heated overnight at 90° C, heated on a hot plate, or heated in a manner not described. None of the examples illustrate spray drying at temperature between about 120° and about 350°C. Therefore, it is believed that Hamling neither anticipates nor renders obvious the present claims.

If, for any reason, the Examiner feels that the above amendments and remarks do not put the claims in condition for allowance, the undersigned attorney can be reached at (312) 321-4276 to resolve any remaining issues.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G. Peter Nichols', written over a horizontal line.

G. Peter Nichols
Registration No. 34,401

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200